# Clam Lake Elk--2004 Calendar Year Report

**Current Status:** An inquiry in May required intensive review of all elk demographic information collected during the past 9 years. Review of this information revealed that we did not have as many elk in the Clam Lake herd as we thought. This discrepancy was based upon use of older information being used for current production estimates. However, because of DNR's increased monitoring effort over the past 3 years better information was available and these estimates and projections were upgraded. During the research stage of the Clam Lake Elk herd, UW-Stevens Point researchers had observed between 28-31 percent annual growth in the herd. However, current growth is slightly more than 10 percent. Why the big change? Review of available information indicated that our breeding cow herd has matured to where there's a significant reduction in pregnancy rates with a sizeable proportion of the cow herd. Furthermore, newborn sex rations were heavily biased towards males with a 16 bulls for every 10 cows born. The literature indicates this is likely due to high proportion of bulls to cows in the breeding population, currently 8 bulls for every 10 cows (normal in an unhunted population is more like 5-6 bulls per 10 cows.

Using the Ricker Elk Population Model results in an elk population estimate post 2004 calving season of 116 elk. At the present we have to incorporate observed mortality since the 2004 calving season. Using proportion of marked to unmarked animals and then extrapolating the 6 observed marked and 1 unmarked mortalities since calving started in May, result in a current population estimate of 103 elk. If we use our earlier estimate of 123 elk post calving 2004 and reduce by extrapolated mortality we would have 110 elk at this time (January 19, 2005). Three of these mortalities were due to lethal levels of parasites, 2 liver fluke and 1 brain worm. Both types of parasites have land snails and slugs as alternate host with deer/elk as the other alternate host. Last Summer was abnormally cool and moist, ideal conditions for land snails and slugs. In past years liver fluke infestations were sub-lethal in severity and only 1 case of brain worm had been observed, however, these recent mortalities seem to indicate a spike in occurrence, probably due to the aforementioned summer conditions. Hopefully this won't persist. If it does we'll likely experience lower growth rates in the future.

**Elk Health: Vehicle Collisions--**In an effort to reduce our number one mortality factor of vehicle collisons we've worked with Ashland and Sawyer Counties to expand the "elk crossing" warning area. Based upon telemetry information and incidental sightings we've extended the 2 mile area on STH 77 to 8 miles (from Sawyer/Ashland County line to CTH S) and we established a new, 4 mile "signed" elk crossing area from Little Clam Lake to FR 135 on CTH GG. We lost Cow 133 due to a vehicle collision in August, 2004, prior to that we've lost 9 others over the past 9 years.

**2004 Mortalities**--Bull 121; Yearling; Investigated January 30, 2004; wolf predation.
Bull 154; Calf; Investigated June 11, 2004; injury via mother stepping on hind leg
Bull 143; Calf; Investigated June 14; bear predation
Cow 133; 2 year old; Investigated August 9, 2004; vehicle collision
Bull 127; Yearling; Investigated September 30, 2004; wolf predation with brain worm
Bull 131; Investigated November 16, 2004; excessive liver damage due to flukes
Cow 86; Yearling; Skull found November 16, 2004; unknown cause of death
Bull 128; Yearling; Investigated January 4, 2005; excessive fluke damage & imm. drugs

**Public Education:** During 2004 Elk Project Staff gave 25 elk presentations to 972 participants; 5 radio interviews; 4 video media spots; 11 print media interviews, and wrote 4 magazine articles.

**Partnerships:** In December, 2004 we met with Forest Administrator Ann Archie, forest staff and stakeholders regarding elk management issues on the National Forest. We've also provided elk telemetry information to both Drs. Dean Anderson of UW-Madison and Tim Ginnett of UW-Stevens Point, investigating elk distribution and elk/wolf/bear predation relationships, respectively. We've also recovered 3 gps collars and deployed 1 gps collar for Dr. Anderson in 2004 (each collar collects about 5 to 6 thousand locations per 54 week period. Four research publications have been drafted from these 2 research groups and are in the process of being published or released. Also in 2004 we assisted Rocky Mountain Elk Foundation, The Trust for Public Lands, and the USFS on land acquisition projects, and on 3 conservation

easement projects with RMEF in the Clam Lake Elk Range. Elk Project Staff gave 2 presentations at RMEF banquets in 2004.

**Monitoring:** During 2004 we've had between 50 and 64 collared elk where we've collected weekly telemetry information to investigate productivity, mortality, distribution and habitat use. In addition to the 3 gps collars collected for UW-Madison we also collected 4,219 vhf radio collar locations and 6,621 mortality checks in 2004.

**Elk Trapping:** During the winter of 2003/2004 we trapped 43 elk and placed 8 collars on uncollared animals and recollared 8 other previously collared animals.

**Calf Searching:** During the 2004 calving season we did daily monitoring of 27 cows of which we searched 19 where we found 15 calves and collared 13. As of January 20, 2005, we've lost 2 of those collared calves (see the mortality section above).